



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,719	01/28/2005	Karl Haberle	264520US0PCT	7449
22850 7590 01/08/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
SERGENT, RADON A				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
01/08/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/522,719

Applicant(s)

HABERLE ET AL.

Examiner

Rabon Sergeant

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 14, 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 4, 5, and 8-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Haeberle et al. (*367).

Patentees disclose dispersible polyisocyanate compositions, suitable for producing aqueous dispersions, coatings, and adhesives, wherein the dispersible polyisocyanates are produced by blending one or more polyisocyanates having a mean functionality of from 2.5 to 3.5 with an emulsifier produced by reacting a diisocyanate with a monohydric polyalkylene ether

alcohol having 8 or more ethylene oxide units. Patentees further disclose that isocyanatoisocyanurates based on hexamethylene diisocyanate and/or isophorone diisocyanate are “particularly preferred”. Biuret containing polyisocyanates and mixtures of the disclosed polyisocyanates are also disclosed as being suitable. See abstract; column 1, lines 7-28; column 2, lines 4+; column 3, lines 34+; column 4, lines 9+; column 5; and column 6, lines 1-6; especially column 2, line 66 through column 3, line 2. The position is taken that the disclosure that isocyanatoisocyanurates based on hexamethylene diisocyanate and/or isophorone diisocyanate are “particularly preferred” fully encompasses applicants’ mixtures of components (A) and (B) and is adequate to anticipate the claims. With respect to applicants’ claimed ranges for components (A), (B), and (C), the following positions are taken. Firstly, patentees teach at column 2, lines 48-53 that reaction product b), corresponding to applicants’ component (C), is mixed with polyisocyanate a), corresponding to applicants’ combined components (A) and (B), such that the formulation contains from 1 to 25 weight percent ethylene oxide units of the polyalkylene ether chains of reaction product b). While it is cumbersome to convert this disclosure to a percent content that corresponds to applicants’ claimed range, it is clearly suggestive that a range that allows for minimal or reduced content of reaction product b), relative to the polyisocyanate, is contemplated. Furthermore, the examiner has calculated the percent content of reaction product b) within each example and finds the following. Examples 1-10 and 12 have from 16-17 weight percent of reaction product b), relative to the total formulation, and Example 11 has 10 weight percent of reaction product b), relative to the total formulation. These exemplified amounts fall squarely within applicants’ claimed range for component (C). Therefore, with respect to the claimed percent content of component (C), the reference is clearly

anticipatory. Secondly, as aforementioned, the position is taken that patentees clearly allow for the use of blends of the HDI-based polyisocyanate and the IPDI-based polyisocyanate, and though patentees do not specifically relate relative proportions of the respective polyisocyanates, the position is maintained, despite applicants' arguments, that one would have immediately envisioned polyisocyanate component amounts of the blend, such as 50:50 mixtures, that fall within the claimed percent contents. For example, though the examples do not disclose mixtures of polyisocyanate a), the examples disclose weight percent quantities of reaction product b) of 10 percent and 16-17 percent. This allows for a respective content of polyisocyanate of 90 percent and 83-84 percent. Given this determination and allowing for envisioned blends of 50:50, one arrives at a content of 45 percent of HDI-based component and 45 percent IPDI-based component or 41.5-42 percent of HDI-based component and 41.5-42 percent of IPDI-based component. It is noted that these weight percent quantities fall squarely within applicants' claimed ranges for components (A) and (B), respectively. Accordingly, it is logical to conclude that the reference is anticipatory.

3. The examiner has carefully considered applicants' response; however, the response is insufficient to overcome the prior art rejection. The examiner has considered applicants' argument with respect to the examiner's position with respect to what would be "immediately envisioned" from the teachings of the reference, and the position previously set forth has been maintained. Specifically, though ratios of the mixtures are not recited, given the strong and clear teachings that mixtures of polyisocyanates can be used, the position is taken that one considering the meaning of mixtures, would immediately envision a 50:50 blend. Furthermore, applicants' argument set forth within the paragraph bridging pages 3 and 4 of the response has been

considered; however, it is unclear what basis or authority is being relied upon for applicants' position or conclusion; therefore, applicants' position amounts to unsubstantiated opinion. Furthermore, applicants' argument with respect to the use of a solvent to disperse high viscosity blends is not seen to be relevant or commensurate in scope with the claims, since applicants' claims specifically allow for the use of a solvent and are devoid of viscosity limitations.

4. Claims 1, 4-6, and 8-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haeberle et al. ('367) in view of Morikawa et al. ('300).

As aforementioned, Haeberle et al. disclose dispersible polyisocyanate compositions, suitable for producing aqueous dispersions, coatings, and adhesives, wherein the dispersible polyisocyanates are produced by blending one or more polyisocyanates having a mean functionality of from 2.5 to 3.5 with an emulsifier produced by reacting a diisocyanate with a monohydric polyalkylene ether alcohol having 8 or more ethylene oxide units. Patentees further disclose that isocyanatoisocyanurates based on hexamethylene diisocyanate and/or isophorone diisocyanate are "particularly preferred". Biuret containing polyisocyanates and mixtures of the disclosed polyisocyanates are also disclosed as being suitable.

5. Even if it is determined that the argued disclosure within Haeberle et al. is insufficient to anticipate applicants' weight percent limitations of components (A) and (B), the position is taken that the production of dispersible polyisocyanate, wherein the polyisocyanate constitutes a blend of isocyanurate of hexamethylene diisocyanate and isocyanurate of isophorone diisocyanate having a ratio range of HDI-based compounds to IPDI-based compounds that significantly overlaps that claimed, was known at the time of invention. This position is supported by Morikawa et al. See abstract; column 2, lines 15-47; column 3, lines 49-59; column 4, lines 17-

26, and specifically, column 5, lines 25-42. Given applicants' claimed weight percent ranges for components (A), (B), and (C), the ratio range of applicants' component (A) to applicants' component (B) corresponds approximately to 95:5 to 33:67, and it is noted that Morikawa specifically discloses a preferred corresponding range of 95:5 to 35:65 at column 5, lines 29 and 30. It is further noted that the isocyanates are rendered dispersible by reacting them with a reactant fully analogous to that of Haeberle et al. and applicants. Morikawa et al. further disclose that their mixture is non-yellowing, is not deteriorated by weather, has high hardness, and is quick drying. Accordingly, the position is ultimately taken that one of ordinary skill would have been motivated to utilize blends of trimers (isocyanurate or biuret) of hexamethylene diisocyanate and isocyanurate of isophorone diisocyanate that satisfy the claimed quantitative ratios, as the high functionality polyisocyanate of the primary reference, so as to arrive at the instant invention. Furthermore, with respect to claim 6, in view of the secondary teachings, it would have been obvious to modify applicants' components (A) and (B) by reacting them with the nonionic group containing reactant.

6. The examiner has considered applicants' response; however, the response is insufficient to overcome the prior art rejection. Applicants have argued that one would not combine the disclosures of Haeberle et al. and Morikawa et al. in view of the differences in desired viscosity and NCO functionality. To support their position, applicants refer to Example 1 within Morikawa et al. In response, firstly, it is noted that it is unclear how applicants arrive at their "desired viscosity" position. The examiner finds no evidence to support the position that one would conclude that the references are not combinable based on viscosity requirements. Secondly, applicants' reliance on the functionality of Example 1 fails to appreciate the fact that

Morikawa et al. are not limited to the argued exemplified functionality; Morikawa et al. clearly allow for functionalities of 2.0 to 4.2 for the mixtures relied upon by the examiner. See column 2, line 18. Applicants are reminded that a reference is good for all that it teaches, and that relevant teachings are by no means limited to the disclosures of the examples. Accordingly, the position is taken that the functionality requirements for the mixtures of the references are compatible with each other. In summation, the position is taken that applicants have failed to appreciate the combined teachings of the references.

7. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haeberle et al. ('367), alone, or Haeberle et al. ('367) in view of Morikawa et al. ('300) as applied to claims 1, 4-6, and 8-19 above, and further in view of Weyland et al. ('421).

As aforementioned, the teachings of Haeberle et al., alone, or Haeberle et al. in view of Morikawa et al. render the subject matter of claims 1, 4-6, and 8-19 at least *prima facie* obvious; however, the references are silent with respect to applicants' claimed solvents of claims 7 and 20. Still, the use of the claimed solvents with water emulsifiable polyisocyanates was known at the time of invention. The position is supported by the teachings of Weyland et al. See abstract and columns 2-4, especially column 3, line 47 through column 4, line 11. Since both Haeberle et al. and Morikawa et al. disclose that solvents may be used, the position is taken that it would have been obvious to utilize the solvents of Weyland et al. as the solvents of these references. This position is bolstered by the fact that it has been held that it obvious to utilize a known compound for its art recognized purpose. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244.

8. It is noted that applicants have not specifically addressed this rejection.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

/Rabon Sergent/
Primary Examiner, Art Unit 1796

R. Sergent
January 5, 2009